

The Narragansett Electric Company d/b/a National Grid
and Clear River Energy LLC
(Burrillville Interconnection Project)
RIPUC Dkt. No. 4737

Testimony of
David J. Beron, P.E., P.M.P.

November 7, 2017

1 INTRODUCTION

2 Q. Please state your name and business address.

3 A. My name is David J. Beron. My business address is 40 Sylvan Road, Waltham,
4 Massachusetts 02451.

5 Q. By whom are you employed and in what position?

6 A. I am employed by National Grid USA Service Company as a Principal Project Manager
7 in the Project Management & Complex Construction Department.

8 Q. What is National Grid USA Service Company?

9 A. National Grid USA Service Company (the “Service Company”) is a wholly owned
10 subsidiary of National Grid USA, an energy company specialized in the transmission and
11 distribution of electricity and natural gas. The Service Company provides administrative
12 and technical services (such as engineering, accounting and legal services) to the other
13 subsidiaries of National Grid USA, including The Narragansett Electric Company d/b/a
14 National Grid (“TNEC” or the “Company”).

15 Q. What are your responsibilities as Project Manager?

16 A. As Project Manager I am responsible for managing all aspects of assigned projects,
17 including developing and gaining approval for project scope, cost estimation, project
18 schedule, project budget and resourcing, compliance with environmental and safety
19 standards and policies, project licensing and permitting, project communications,
20 engineering and design, procurement, construction and commissioning of facilities.

21 Q. Please describe your education, training and experience.

1 A. I have a Bachelor of Science Degree in Civil Engineering from the University of Rhode
2 Island and a Masters of Management Degree from Lesley University. I am a registered
3 Professional Engineer in the State of Rhode Island, and a certified Project Management
4 Professional. I have 30 years of professional experience in the areas of engineering,
5 design, and project management of electric utility infrastructure projects.

6 Q. Have you previously testified before the Public Utilities Commission or the Energy
7 Facility Siting Board?

8 A. Yes, on numerous occasions and in various proceedings; for example, I testified before
9 the PUC on the Interstate Reliability Project, L-190, E-183 and Southern Rhode Island
10 Transmission Line Projects and before the EFSB in those and numerous other
11 transmission line reconductoring and relocation projects.

12 Q. Are you familiar with the Burrillville Interconnection Project (the "Project")?

13 A. Yes, I am the Project Manager for the Project and am responsible for managing the
14 engineering, design, licensing and other aspects of the Project.

15 SCOPE OF TESTIMONY

16 Q. What is the scope of your testimony in this proceeding?

17 A. In my testimony, I will provide an overview of the Project, explain Project details,
18 address alternatives to the Project, review Project Cost, and summarize Project
19 construction and schedule.

20 Q. Are you familiar with the Company's and Clear River Energy LLC's Energy Facility
21 Siting Board Application dated February, 2017 for the Project, including the
22 Environmental Report ("ER") prepared by Power Engineers?

1 A. Yes, these documents were prepared under my supervision and direction.

2 DESCRIPTION OF PROJECT

3 Q. What is the purpose of the Project?

4 A. The sole purpose of the Project is to connect the proposed Clear River Energy Center
5 (“CREC”) to the New England electric system. ISO-New England (“ISO-NE”)
6 performed a feasibility study to explore connection options and concluded that the CREC
7 should be connected by a dedicated 345 kV line into the existing Sherman Road
8 Switching Station located in Burrillville, Rhode Island.

9 Q. Please describe the components of the Project.

10 A. The Project is a new 6.8 mile 345 kV transmission line to be designated as the 3052 Line.
11 The Project is broken into three distinct segments of right-of-way (“ROW”). Segment 1
12 is the first 0.8 mile of the new line which is on a new ROW on property controlled by
13 CREC. The remaining 6.0 miles of the Project is within the Company’s existing ROW.
14 Segment 2 is the first 1.6 miles of the TNEC ROW from the intersection with the CREC
15 ROW east towards Clear River. This portion of the ROW is 300 feet wide. Segment 3 is
16 the remaining 4.4 miles of the TNEC ROW from the vicinity of the Clear River to the
17 Sherman Road Switching Station. Segment 3 is 500 feet wide. In order to make space
18 for the new line, the existing 345 kV transmission lines designated as the 341 and 347
19 Lines will be reconfigured in Segment 2. The 341 Line will be shifted north onto new
20 steel monopole structures and the existing wires and structures of the 341 Line will
21 become the new 347 Line. The old 347 Line will be removed and replaced with new
22 structures and wires for the 3052 Line.

1 Figure 1-1 “Project Overview Map” of the ER provides an overview of the Project
2 location in Rhode Island, Figure 2-1 provides a schematic representation of the ROW
3 segments, and Figure 2-2 (Sheets 1-13) provides Project alignment details. Figure 4-1 of
4 the ER provides cross-sectional views of the three ROW segments.

5 ALTERNATIVES

6 Q. Please discuss the alternatives that National Grid considered in connection with the
7 Project.

8 A. A variety of alternatives were considered and evaluated in connection with the Project,
9 including the No-Action alternative, electrical alternatives, alternative overhead routes,
10 and underground transmission line alternatives.

11 The no-action alternative was dismissed as it would not address the need to interconnect
12 the proposed CREC to the electric system. National Grid considered two (2) electrical
13 alternatives to the Project: connection to the existing 345 kV transmission lines, and a
14 115 kV alternative. The connections to one or both of the existing 341 and 347 Lines
15 were rejected by ISO-NE because they presented unacceptable reliability issues and
16 power transfer limitations. The 115 kV alternative was rejected because it would require
17 115 kV/345 kV transformation at the Sherman Road Switching Station and the additional
18 equipment would limit the future use of the station.

19 There were two overhead routes considered for this Project. The proposed route is along
20 the existing TNEC ROW. The other route was adjacent to the Algonquin Gas
21 Transmission Pipeline ROW (“AGT ROW”). This route has the benefit of not requiring
22 the relocation of the existing 341 and 347 Lines to accommodate the new line. However,

1 this option would require clearing an approximately 150 foot wide ROW and building
2 new access roads along the entire length of the AGT ROW located between CREC and
3 the vicinity of the Sherman Road Switching Station. The AGT ROW route would also
4 require new easement rights along the entire length of the AGT ROW. This alternative
5 was rejected because of the potential project delays and costs from the land acquisition
6 and the increased impacts to the natural and social environments from creating a new 6
7 mile corridor. These alternatives are discussed more fully in Section 5.4 of the ER.

8 National Grid has also evaluated alternate structure types for constructing the proposed
9 transmission line within the existing ROW. The construction alternatives included using
10 single-circuit monopole structures and double-circuit monopole structures. As discussed
11 in ER Section 5.5, we concluded that using the proposed single-circuit H-Frame
12 structures for the new transmission line and monopoles for the shifted 341 Line offered
13 more advantages, created fewer impacts, and was a more cost-effective solution than any
14 of the alternative structure types.

15 The Company also evaluated three underground transmission line alternative routes for
16 the new transmission line. The alternatives included using the Project ROW, the AGT
17 ROW, and public roadways. Ultimately, the public roadways alternative was selected as
18 the preferred underground route because it presented fewer environmental and property
19 acquisition issues. While the underground alternative met the identified needs of the
20 Project, it presented significant operational issues, longer restoration times, and voltage
21 control issues that make it technically inferior to the proposed overhead route. In
22 addition, the significantly higher cost and operational issues make the underground

1 alternative less desirable. The underground transmission line alternative is detailed in
2 Section 5.6 of the ER.

3 ESTIMATED PROJECT COSTS

4 Q. What is the estimated cost of the Project?

5 A. National Grid has prepared conceptual grade estimates of the Project costs. Conceptual
6 grade estimates are prepared prior to detailed engineering plans using historical cost data,
7 data from similar projects, and other stated assumptions of the Project Engineer. The
8 accuracy of conceptual grade estimates is expected to be -25 percent/+50 percent.
9 Estimated costs include costs of materials, labor, and equipment. The estimated cost of
10 the Project is \$47.2 million, as shown in Table 4-2 of the ER. Clear River Energy LLC is
11 solely responsible for all costs of the Project, including future operation and maintenance
12 costs for the new 3052 Line.

13 CONSTRUCTION PRACTICES AND SCHEDULE

14 Q. Please explain the construction practices that the Company will use in constructing the
15 Project.

16 A. Our construction practices and process are described in Section 4.2 of the ER. Once all
17 necessary permits and licenses have been obtained for the work, the Company will
18 commence construction. The first activities to take place will be vegetation
19 mowing/clearing within the ROW as necessary, and the installation of appropriate
20 erosion and sedimentation control devices. These activities are detailed in Sections
21 4.2.1.1 and 4.2.1.2 of the ER. The next step in the construction sequence is to perform
22 access road and work pad construction and maintenance, including the construction of

1 temporary swamp mat access roads where required. Improving the access along the
2 ROW, which is described in Section 4.2.1.3 of the ER, will allow construction personnel
3 and equipment to reach work locations in a safe, efficient and environmentally sensitive
4 manner. After access has been improved along the corridor, construction crews will
5 begin construction of the new 341 Line in Segment 2 by installing foundations and pole
6 structures. Following the erection of transmission pole structures, insulators will be
7 installed on the structures. Shield wires and conductors will then be installed using
8 stringing blocks and tensioning equipment. Once the new segment of the 341 Line is
9 completed, the 347 Line will be shifted to the old 341 Line in Segment 2 and the
10 remaining 347 Line will be removed to make room for the construction of the new 3052
11 Line. The construction process summarized for the 341 Line will be repeated along the
12 length of the Project ROW for the new 3052 Line. ROW restoration efforts, including
13 final grading and stabilization of disturbed areas, will be completed following the
14 construction operations. Throughout the entire construction process, the Company will
15 retain the services of an environmental monitor whose primary responsibility will be to
16 ensure compliance with all federal, state and local permit requirements and the policies of
17 the Service Company.

18 Q. What is the schedule for the Project?

19 A. We expect the Project construction to take between 12-18 months to complete. A high
20 level project schedule is contained in Table 4-3. As noted in our application, this Project
21 will only proceed if CREC is approved and built.

22 Q. Does this complete your testimony?

The Narragansett Electric Company
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1 A. Yes, it does.